

Heller, Gy.

90. Braking characteristics of railway vehicles. (In French) Gy. Heller *Acta Technica Academiae Scientiarum Hungaricae*, Vol. 12, 1955, No. 1-2, pp. 121-137, 6 figs.

The paper deals with the problems of the braking characteristics of railway vehicles. The difficulties which in general hinder the determination of these characteristics are briefly described. Subsequently an attempt is made to elaborate a method which is not too complicated and makes comparatively few concessions to the detriment of the correct theory; later this method is extended to the concept of the brake weight. The possible fluctuations of braking characteristics under given operational conditions are investigated. It was established that under different operational conditions the characteristic value of a given braking equipment may vary to various degrees. The danger of mountain tracks is indicated from a theoretical viewpoint. The conclusion is drawn that neither theory nor practice alone is capable of solving the problems correctly, therefore the simultaneous application of both is indispensable.

Mach

HELLER, Gyorgy; ROSTA, Laszlo

Dimensioning of locomotive brake gears. Jarmu mezo gep 4 no.1:
16-24 Ap '57.

HELLER, Gy., ROSTA, L.

Investigation of the locomotive-brake load. In Franch. p. 45. (Acta Technica, Vol. 16, No. 1/2, 1957, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

HELLER, Gyorgy, dr.; ROSTA, Laszlo

Modernization of certain rules for braking. Vasut 14
no.10:31-32 0 '64.

HELLER, Gyorgy, okleveles gepeszmernok; ROSTA, Laszlo, okleveles
gepeszmernok

Highly sensitive brake devices. Jarmu mazo gep 8 no.11:
402-407 N '61.

1. MAV vezeto formernok; MAV Vezirigazgatosag alosztalyvesetoje
(for Heller). 2. MAV vezeto fomernok; MAV Vezirigazgatosag
mernok foeladoja (for Rosta).

02 10/10/77, 10/10/77, 10/10/77

problems relating to the air brake-operated freight trains
made up of many cars. Vacant in the past for the...

CONSTANTINESCU, P., Dr.; PISPIRIS, E., dr.; HELLER, H., dr.

Study of non-specific desensitization in asthmatic disease.
Med. int., Bucur. 3 no.7:1066-1069 Nov 56.

1. Spitalul unificat adulti nr. 2 Ploesti.

(ASTHMA, therapy

desensitization, non-specific, with microtransfusions
of blood with magnesium sulfate)

(MAGNESIUM SULFATE, ther. use

asthma, admin., intravenous inject. with microtransfusions
of blood)

(BLOOD TRANSFUSION, ther. use

microtransfusions in asthma, with intravenous inject.
of magnesium sulfate)

H HELLEK, I.		002 002 100	
<p>04. Storing of the Rózsaszentmárton lignite of the Petőfi Mines, by I. Hellek. („Magyar Energetika és Villamos Műszaki Lapok” — Power Economy in Hungary — Vol. 11, No. 7—8, pp. 7—8, July—Aug., 1970.)</p> <p>Storing coal in steam power plants is generally a serious problem. During the course of investigations the storage of 0—40 grain size coal was dealt with mainly. Storing in the open did not prove satisfactory either, for the drying costs were too high. Therefore, it is obvious that the coal piles must be provided with a thin covering. At present, four different tests are in progress with a view to finding the most satisfactory covering for piles such as: (a) covering of concrete, (b) tar or pacura, (c) loess and (d) its own coal dust. Tests made with layers of pacura led to exceptionally favourable results.</p>			
<p>ASD-61A METALLURGICAL LITERATURE CLASSIFICATION</p> <p>ROOM SYMBOL</p> <p>10000 04</p> <p>100000 010 000 000</p> <p>00000000</p> <p>00000000</p>			

HELLER, Jiri; SMAJCL, Frantisek

Sealants as a substitute for press mounting of antifriction bearings. Stroj vyr 12 no. 5:349-350 My '64.

1. Naradi National Enterprise, zavod 6, Ceska Lipa.

Heller, Jiri

Pharmacology of products of choline and nicotine. ^{MD}
 L. Kratoch, J. Heller, and J. Štěpán (Univ. Prague, Czech.).
 Naunyn-Schmiedeberg Arch. exp. Pathol. Pharmacol. 220,
 328-34 (1965).—The polyhydrate of choline nicotinate gives
 the added effects of its components. The chloride of nico-
 tinoylcholine and its HCl salt cause in rabbits and cats
 changes in the blood pressure which depend on the dosage.
 Moderate doses (4 mg.) cause a drop in blood pressure of 20-
 30 mm. Hg, followed by temporary rebound which ends in a
 slow, progressive decline. The initial depression is accom-
 panied by an inhibition of respiration. The initial depres-
 sion and respiratory arrest are of reflex nature by stimulation
 of the baroreceptors in the left side of the heart and in the
 glomus caroticum. The temporary elevation is the result
 of vasoconstriction by sympathetic stimulation. The ter-
 minal decrease in blood pressure is caused by a weakening of
 the vascular tonus produced by a direct action of the ester
 on the vascular muscles. A. E. Meyer

Sm

LFH

HELLER, Jiri

Demonstration of conditioned reflex secretion of antidiuretic hormone. *Cesk. fysiол.* 5 no.3:372-376 1956.

1. Katedra fysiол. fak. vserbec. lek. KU, Praha.
(VASOPRESSIN, physiology,
secretion, conditioned reflex mechanism (Cz))
(REFLEX, CONDITIONED,
conditioned secretion of vasopressin (Cz))

HELLER, J.

CZECHOSLOVAKIA/ Human and Animal Physiology - Excretion.

V-6

Abs Jour : Ref Zhur - Biol., No 4, 1958, 18262

Author : J. Heller

Inst :

Title : Additional Evidence of the Conditioned-Reflex Secretion of Antidiuretic Hormone.

Orig Pub : Ceskosl. fysiол. 1956, 5, No 3, 373-376

Abstract : After a 3% solution of NaCl (0.5 ml per kg of body weight at a rate of 1 ml per second) was injected into the carotid arteries (which were isolated in a scrap of skin) of dogs with fistulas of the ureters, water diuresis, produced by introducing into the stomach 30 ml of water per kg of body weight, fell off sharply for a certain length of time. After this solution was injected 9 times in combination with a tone, in place of the hypertonic solution the same amount of an isotonic NaCl solution was injected, and almost identical results were obtained. At the height of

Card 1/2

HELLER, J.

Changes of renal functions in certain emotions and in conditioned reflex water diuresis in dog. Cesk. fysiол. 7 no.3:205-206 May 58.

1. Fysiologicky ustav fak. vseob. lekarstvi, Praha.

(KIDNEYS, physiол.

eff. of emotions & conditioned reflex water diuresis in dogs (Cz))

(EMOTIONS, effects,

on kidney funct. in dogs (Cz))

(DIURESIS, physiол.

conditioned reflex water diuresis, eff. on renal funct. in dogs (Cz))

(REFLEX, CONDITIONED,

same)

HELLER, J.

"Changes in the renal functions during some emotions and during water diuresis in dogs caused by conditioned reflexes." p. 205.

CESKOSLOVENSKA FYSIOLOGIE. Praha, Czechoslovakia, Vol. 7, no. 3, May 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8, August, 1959.
Uncl.

EXCERPTA MEDICA Sec 2 Vol 12/5 Physiology May 59

1847. THE INFLUENCE OF THE NERVOUS SYSTEM ON RENAL FUNCTION.
II. CHANGES IN THE URINE FLOW DURING EMOTIONAL DISTURBANCE.

III. NOTES ON THE MECHANISM OF CONDITIONED WATER DIURESIS -

Heller J. and Krulich I., Dept. of Physiol., Fac. of Gen. Med.,
Charles Univ., Prague - PHYSIOL. BOHEM. 1958, 7/4 (363-369 and 370-375) Graphs 5

II. The effect of emotional influences on renal function was studied in 5 unanaesthetized dogs with ureteral fistulae and one denervated kidney. Following the sudden ringing of an electric bell, water diuresis, GFR and Na excretion decreased on the innervated side but not on the denervated side, probably as a result of direct nervous influence. Painful stimulation was usually followed by a fall in water diuresis in both kidneys. This resembled that following post-pituitary extract and was most probably caused by a release of ADH. In a few cases there was a brief decrease in the urine flow, GFR and Na excretion in both kidneys, which was apparently due to a release of adrenaline. In 4 cases the decrease occurred only on the innervated side, evidently as a result of direct nervous influence on the renal blood vessels. In dogs not adapted to the experimental environment, polyuria of the character of osmotic diuresis occurred, GFR did not change and the denervated kidney reacted in the same way as the innervated kidney. The mechanism of this polyuria is still unexplained.

III. Changes in renal function during unconditioned and conditioned water diuresis were studied in 4 unanaesthetized dogs with ureteral fistulae and a denervated left kidney. During unconditioned water diuresis an increase occurs in the urine flow, with non-significant changes in GFR and in electrolyte excretion. During conditioned water diuresis an increase in water excretion occurs, GFR rate is in general lower, but Na excretion and the Na concentration in the urine are considerably higher than in the spontaneous urine flow. Conditioned diuresis, occurring in response to feigned administration of water, therefore, had the character of 'osmotic' diuresis. This phenomenon also occurred in the denervated left kidney.

HELLER, J.

Modification of renal function during conditioned reflex diuresis following administration of hypertonic sodium chloride solution. Cesk. fysiол. 7 no.5: 465-466 Sept 58.

1. Fysiologicky ustav fak. vseob. lek. MU, Praha.

(REFLEX, CONDITIONED,

conditioned diuresis after admin. of hypertonic solution,
eff. on renal funct. (Cz))

(DIURESIS,

same)

(KIDNEYS, physiол.

eff. of conditioned reflex diuresis after admin. of hypertonic
solution (Cz))

HELLEL, J.; STULC, J.

A modified method of titration of antidiuretic hormone. Cesk. fysiол.
7 no.5:466-467 Sept 58.

1. Fysiologicky ustav fak. vseob. lek. UK, Praha.
(VASOPRESSIN, determ.
titration (Cs))

HELLER, J.; STULC, J.

Significance of a new method of titration of antidiuretic hormone.
Cesk. fysiolo. 8 no.3:194-195 Apr 59.

1. Fysiologicky ustav fak. vseob. lek. KU, Praha. Predneseno na
III. fysiologickych dnech v Brne, dne 14. 1. 1959.

(VASOPRESSIN, determ.
titration technic (Cs))

HELLER, J.

Changes of renal function in conditioned reflex polyuria to mercurial diuretics. Cesk. fysiол. 8 no.3:194 Apr 59.

1. Fysiologicky ustav fak. vseob. lek. KU, Praha, Predneseno na III. fysiologickych dnech v Brne 14. 1. 1959.

(REFLEX, CONDITIONED,

conditioned polyuria to mercurial diuretics, eff. on renal funct. (Cz))

(DIURESIS,

same)

HELLER, J.

Changes in hemoglobin, hematocrit and plasma sodium concentrations
in conditioned and unconditioned water diuresis in dogs. Cesk.
fysiol. 8 no.5:407 S '59

1. Fysiologicky ustav fak. vseob. lek. KU, Praha.
(BLOOD CELLS)
(HEMOGLOBIN)
(REFLEX CONDITIONED)
(SODIUM BLOOD)
(DIURESIS physiol.)

HELLER, J.; HRADCOVA, L.

Antidiuretic activity of rat and human plasma during the course of antogenesis. *Cesk. fysiolo.* 9 no.1:16 Ja 60.

1. Fysiologicky ustav a IV. detska klinika fak. vseob. lek. KU, Praha.

(VASOPRESSIN, blood)

CAPEK, K.; HELLER, J.

Antidiuretic activity of the plasma in ontogenic development of dogs. Cesk.fysiol. 9 no.3:223 My '60.

1. Fysiologicky ustav CSAV, Fysiologicky ustav fak. vseob.lek.
KU, Praha.

(VASOPRESSIN blood)

HELLER, J.

Changes of osmotic concentrations of urine and plasma during
conditioned water diuresis. Cesk.fysiol. 9 no.3:233 My '60.

1. Fysiologicky ustav fak. veseob.lek. KU, Praha.
(SODIUM urine)
(DIURESIS)
(REFLEX CONDITIONED)

KORASEK, F.; HELLER, J.

Effect of nicotinic acid and ethiacin on water diuresis. Cesk.
fysiol. 9 no.3:241-242 My '60.

1. Fysiologicky ustav fak. vsetob.lek. KU, Praha
(DIURESIS pharmacol)
(NICOTINIC ACID pharmacol)

SZARKOWSKA, Ludmila; HELLER, J. .

. Studies on coenzyme Q reduction. Acta biochim. polon. 8 no.4:437-447 '61.

1. Institute of Biochemistry and Biophysics, Polish Academy of Sciences, and Department of Physiological Chemistry, Medical School, Warszawa.

(QUINONES chem)

HELLER, J.

The influence of the nervous system on renal function. VI. Changes in renal function in unconditioned and conditioned elevation of bile secretion in the dog. *Physiol Bohemoslov* 10 no.5:427-431 '61.

1. Department of Physiology, Faculty of General Medicine, Charles University, Prague.

(REFLEX CONDITIONED) (REFLEX) (BILE)
(KIDNEYS physiol)

HELLER, J.

Some changes in the urine and blood of dogs during conditioned water, osmotic and mercury diuresis. *Physiol Bohemoslov* 10 no. 6:510-521 '61.

1. Department of Physiology, Faculty of General Medicine,
Charles University, Prague.

(DIURESIS physiol)	(REFLEX CONDITIONED)
(DIURETICS MERCURIAL pharmacol)	(WATER ELECTROLYTE BALANCE)

CAPEK, K.; HELLER, J.

Antidiuretic activity of the plasma and posterior pituitary lobe during ontogenesis in the dog. *Physiol Bohemoslov* 10 no.6:522-528 '61.

1. Institute of Physiology, Czechoslovak Academy of Sciences, Department of Physiology, Faculty of General Medicine, Charles University, Prague.

(DIURESIS physiol)
(AGING)

(PITUITARY GLAND POSTERIOR physiol)
(THIRST physiol)

HELLER, J.

Contribution to the study of constitutional (typological) divisions
in the effect of nutrition on higher nervous activity. *Activ. nerv.*
sup. 4 no.2:179 '62.

1. Fyziologicky ustav fakulty vseobecneho lekarstvi Karlovy university
v Praze.

(CENTRAL NERVOUS SYSTEM physiolo)
(REFLEX CONDITIONED)
(DIETS exper)

HELLER, J.

On the mechanism of conditioned reflex changes of diuresis. *Activ. nerv. sup.* 4 no.2:179-180 '62.

1. Fysiologicky ustav fakulty vseobecneho lekarstvi Karlovy university v Praze.

(REFLEX CONDITIONED) (DIURESIS physiol)

LASSOTA, Zofia; SZYMCHYK, Teresa; HELLER, J.

Endogenous respiration of mycobacterium phlei at various temperatures.
Acta biochim. Pol. 9 no.1:47-54 '62.

1. Institute of Biochemistry and Biophysics, Polish Academy of Sciences,
and Department of Physiological Chemistry, Medical School, Warszawa.

(MYCOBACTERIUM metab)

POREMBSKA, Zofia; HELLER, J.

Studies on the ornithine cycle in the tissues of *Helix pomatia* during hibernation. *Acta biochim. pol.* 9 no.4:385-390 '62.

1. Department of Physiological Chemistry, Medical School, and Institute of Biochemistry and Biophysics, Polish Academy of Sciences, Warszawa.
(SNAILS) (ORNITHINE) (TRANSFERASES)
(ARGINASE) (HIBERNATION)

HELLER, J.

On the problem of innervation of the renal tubules. Cesk. fysiол.
11 no.1:18-30 Ja '62.

1. Fysiologicky ustav fak. vseob. lek. KU, Praha.
(KIDNEY innervation)

HELLER, J.

The significance of the adrenals and neurohypophysis in the mechanism of conditioned polyuria in the dog. *Physiol. Bohemoslov.* 11 no.2: 113-118 '62.

1. Department of Physiology, Faculty of General Medicine, Charles University, Prague.

(POLYURIA exper) (ADRENAL GLANDS physiol)
(PITUITARY GLAND POSTERIOR physiol)
(REFLEX CONDITIONED)

HELLER, J.

The significance of the efferent urinary passages in the mechanism of conditioned polyuria in the dog. *Physiol. bohemoslov.* 11 no.3: 181-185 '62.

1. Department of Physiology, Faculty of General Medicine, Charles University, Prague.

(POLYURIA experimental)

HELLER, J.

The mechanism of conditioned reflex oliguria. *Physiol. bohemoslov.* 11
no.3:186-191 '62.

1. Department of Physiology, Faculty of General Medicine, Charles
University, Prague.

(ANURIA experimental)

HRADCOVA, Libuse; HELLER, Jiri

Values of the antidiuretic activity of the blood plasma in children.
Cesk. pediat. 17 no.5/6:531-535 Je '62.

1. IV detska klinika v Praze, prednosta prof. MUDr. F. Blazek
Oddeleni fyziologie detskeho veku Fyziologickeho ustavu KU v Praze,
prednosta prof. MUDr. F. Karasek.

(VASOPRESSIN blood)

HELLER, Jiri; KOSOVA, Eva

Some comments on the function of the neurohypophysis. Cas. lek.
cesk. 101 no.21:654-656 My '62.

1. Oddeleni fyziologie detskeho veku, vedouci doc. dr J. Sedlacek,
Fyziologickeho ustavu fakulty vseobecneho lekarstvi KU v Praze,
prednosta prof. dr. Fr. Karasek, DrSc.
(PITUITARY GLAND POSTERIOR physiol)
(VASOPRESSIN physiol)

HELLER, J.

Changes in renal function after denervation of the kidney. Sborn.
lek. 65 no.3:79-91 Mr '63.

1. Oddeleni fyziologie detskeho veku (vedouci doc. dr. J. Sedlacek)
fyziologickeho ustavu fakulty vseobecneho lekarstvi Karlovy university
v Praze, prednosta prof. dr. Fr. Karasek.

(KIDNEY FUNCTION TESTS) (AUTONOMIC NERVOUS SYSTEM)
(NATRIURESIS) (POTASSIUM) (UREA) (PARA-AMINOHIPPURIC ACID)

HELLER, J.

Changes in kidney function during emotion and anesthesia. Shorn.
lek. 65 no.3:92-98 Mr '63.

1. Oddeleni fyziologie detskeho veku (vedouci doc. dr. J. Sedlacek)
fyziologickeho ustavu fakulty vseobecneho lekarstvi Karlovy university
v Praze, prednosta prof. dr. Fr. Karasek.

(KIDNEY FUNCTION TESTS) (AUTONOMIC FUNCTION TESTS)
(EMOTIONS) (THIOPENTAL) : (VASOPRESSIN) (NATRIURESIS)

HELLER, J.

Changes in the urine and blood of dogs during the course of conditioned diuresis. Sborn. lek. 65 no.4:114-125 Ap '63.

1. Oddeleni fyziologie detskeho veku (vedouci doc. MUDr. J. Sedlacek) Fyziologickeho ustavu fakulty vseob. lekarstvi Karlovy university v Praze (prednosta prof. MUDr. F. Karasek).
(DIURESIS) (REFLEX CONDITIONED)
(KIDNEY FUNCTION TESTS)

HELLER, J.

Role of the adrenal glands and the neurohypophysis in the
mechanism of conditioned diuresis in dogs. Sborn. lek. 65
no.4:125-131 Ap '63.

(ADRENAL GLANDS)	(PITUITARY GLAND POSTERIOR)
(DIURESIS)	(REFLEX CONDITIONED)

HELLER, J.

Effect of blood loss on the antidiuretic activity of rat plasma during ontogenesis. *Physiol. Bohemoslov.* 13 no.1:67-71 '64.

1. Institute of Industrial Hygiene and Occupational Diseases, Prague.

TRAVNICKOVA, E.; HELLER, J.

Plasma and blood volume of infant rats during the first post-natal month. *Physiol. Bohemoslov.* 12 no.6:541-547 '63.

1. Institute of Physiology, Faculty of General Medicine, Charles University, Prague.

(BLOOD VOLUME DETERMINATION)

(ANIMALS, NEWBORN) (IRON ISOTOPES)

(DYE DILUTION TECHNIC)

HELLER, J.

The role of emptying of the stomach in absorption of a water load in the rat during ontogenesis. *Physiol. Bohemoslov.* 12 no.6:526-532. '63.

1. Institute of Industrial Hygiene and Occupational Diseases, Prague.

(WATER) (JEJUNUM) (ILEUM) (STOMACH)
(ABSORPTION)

HELLER, Jiri

"Electric tools" by Gerhart Hefft. Reviewed by Jiri Heller. Stroj
vyr 12 no.11:860 '64.

HELLER, J., MARTINEK, J., CAPPK, K.

Outline of phylogenetic development of kidney function. Cesk. fysiол. 13 no.5:429-440 O '64.

Outline of kidney function in the early postnatal period in man. Ibid.:441-460

1. Fyziologicky ustav Ceskoslovenskej akademie ved, Ustav hygieny prace a chorob z povolani, Praha.

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
A-Z													0-9													A-Z													0-9												
<p>HELLER, J.</p> <p>Excretion of emerging butterfly. J. Heller. <i>Acta Biol. Exptl. (Warsaw)</i> 12, 202-4 (1930).—The excretion produced during the emergence of a butterfly from its chrysalis has pH 5.8-6.1 and contains in males 15.5 mg. and in females 12.1 mg. of N in the form of uric acid, 6 mg. of K and 0.4-1.4 mg. of P. B. C. P. A</p>																																																			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

Heller		11-I	
<p>Insect metamorphosis. XIV. Regulation of the metabolism during the pupal stage. The role of tyrosinase. Josef Heller (Univ. Wrocław). <i>Acta Biol. Exptl. (Warsaw)</i> 14, 229-32 (1947); cf. C.A.B. 32, 7137. The respiration of the pupa and pulp of <i>Clerio euphobia</i> was studied in the Warburg app. The respiration of the pulp was as high as that of the pupa of the same age. Added coxymase caused a rise in the O consumption, prolonged the darkening of the respiratory activity, and retarded the blackening of the pulp. It is concluded that coxymase is the main H acceptor from the dehydrogenated metalolites, and that the tyrosinase-tyrosine system is concerned with the transport and oxidation of this H. At pH 7.0 all respiration of the pulp stopped, and this is presumably the isoelec. point of some essential catalyst. The addition of yeast to pulp at a high level of respiration caused no further increase, while pulp at a low level of respiration gave a vigorous reaction; the O consumption in each case was the same, and at the end of the respiration an intensive darkening of the pulp was observed. The effect of yeast is attributed to the presence of Warburg's yellow enzyme which is a specific dehydrogenase of dihydrocoxymase. The vigorous reaction caused by the addition of yeast is then the rapid oxidation of the accumulated dihydrocoxymase, and the equil. between the latter and the quinones derived from tyrosine is disturbed with the resultant oxidation to give melanine.</p>			
<p>H. H. Semant</p>			
<p>ASR-5LA METALLURGICAL LITERATURE CLASSIFICATION</p>			

HELLER, J.

// I

CA

Inorganic pyrophosphate in insect tissue. J. Heller, St. Karpink, and I. Zubikown (Univ., Wroclaw). *Nature* 166, 197-8(1930).—The readily hydrolyzable P fraction in the fat bodies of the male butterfly, *Deilephila euphorbiae* was found to contain as much as 60% inorg. pyrophosphate by isolation as silver pyrophosphate. A small amt. of metaphosphate was also found. R. G. Rice

HELLER, JOZEF

MD ✓ Hyperglycemic reaction in hibernating larvae. Jozef Heller and Irena Mochnicka (Med. Acad., Wrocław, Poland). *Sprawozdania Wrocław. Towar. Nauk.* 6, Dodatek 2, 1-10(1951)(Pub. 1955).--Hibernating larvae show an increase in blood glucose with decreasing temp.: 17-fold when the temp. was reduced from room to 0° and 30-fold when it was reduced to -3°. Similar observations were made on tissue glucose. This phenomenon might be related to an adaptation mechanism and might explain the resistance of hibernating larvae to low winter temps.
Alina S. Szarek



HELLER, JOSEF

POL. 4

✓Compounds containing high-energy phosphate bonds.
Josef Heller. *Forlepy Biochem.* 1, 5-34(1953). A review
covering the oxidation mechanisms in living cells, including
a detailed description of all known high-energy phosphate
comps., the reactions in which they take part, and their
role in general metabolism. 94 references. L. R.

HELLER, Josef

Basic reactions in respiration in plants and animals. Postepy
biochem. Vol.2 44-48 1954.

(METABOLISM, TISSUE,
resp. in plants & animals)

HELLER, J.

HELLER, J.; STEBLOWSKA, D.

Biologically important reducing bodies and their role in purification of sugars. Acta physiol. polon. 5 no.4:565-567 1954.

1. Z Zakladu Biochemii PAN, Warszawa, Kierownik: prof. dr J.Heller.
(CARBOHYDRATES, determination,
reducing substances in)

HELLER, Jozef

Hibernal diapause in hawk moths. Acta physiol. polon. 5 no.4:577-578 1954.

1. Z Zakladu Biochemii PAN, Warszawa. Kierownik: prof. dr J.Heller.
(MOTHS,
hibernal diapause in hawk moths)

HELLER, JOZEF.
HELLER, Jozef

Relation of temperature to rapid growth rate in hawk moth. Acta
physiol. polon. 5 no.4:578-580 1954.

1. Z Zakladu Biochemii AAN, Warszawa, Kierownik: prof. dr J.Heller.
(MOTHS,
eff. of temperature on develop. of hawk moth)
(TEMPERATURE, effects,
on hawk moth develop.)

HELLER, Jozef

Atypical forms of dependence of the development to temperature in hawk moth. Acta physiol. polon. 5 no.4:581-582 1954.

1. Z Zakladu Biochemii PAN, Warszawa. Kierownik: prof. dr J.Heller.

(MOTHS,

eff. of temperature on develop. in hawk moth, atypical forms of dependence)

(TEMPERATURE, effects,

on hawk moth develop., atypical forms of dependence)

HELLER, Jozef; SZAIRANSKI, Przemyslaw

Pentose cycle in carbohydrates in Mycobacterium phlei.
Acta biochim. polon. 2 no.4:435-442 1955.

1. Z Zakladu Biochemii PAN w Warszawie Kier. prof. dr. J.
Heller, Pracownia Biochemii Ewolucyjnej. Kier. prof. dr.
Irena Mochacka.

(MYCOBACTERIUM,
phlei, pentose cycle in carbohydrates (Pol))
(CARBOHYDRATES, metabolism,
mycobact. phlei, pentose cycle (Pol))
(PENTOSE,
cycle in carbohydrates in Mycobact. phlei (Pol))

Enzymic preparations of Mycobacterium phlei convert phosphoribose to
sedoheptulose whose degradation to hexose was shown spectrophotometrically by
Dische's cysteine method. (Dische, Settle and Osno, Arch. Biochem., 1949, 22, 169)
Therefore these preparations possess pentose isomerase, transaldolase, and
transketolase activity. (Polish)

HELLER, Jozef.

Summary of activities at the conference of the biochemical section
during the 4th (6th) Congress of the Polish Physiological Society.
Acta physiol. polon. 6 no.2:169-170 '55.
(BIOCHEMISTRY,
conf.)

Heller, Jozef

Reducing bodies in blood and tissues of *Colaris* species.
Heller, Jozef and Irene Machnacka (Med. Acad.
Wroclaw, Poland). *Spramoidenia Wroclaw, Tomar. Med.*
6. Dodatek 3, 1-12 (1951) (Pub. 1955).—Sugar comprises
only 5-60% of the reducing value detd. by the following
method. Tyrosine is the main nonsugar reducing sub-
stance. However, it does not account for the total reduc-
ing value and the presence of other nonsugar reducing
compds. is suspected. *Allyn St. Baranulak*

HEKKER, J.

694. Enzymes of pentose cycle in *Mycobacterium tuberculosis* 1137 Ev.
P. Szafranski and J. Heller *Bull. Acad. polon. Sci.*, 1958, 6, 197-210
(Inst. of Biochemistry, Polish Acad. of Sciences, Warsaw, Poland).
An investigation of the enzymes of *M. tuberculosis* shows that
they are similar to those of *M. palei* previously reported (*Acta*
biochim. polon., 1955, 2, 435). The mechanism of the enzymic
reactions and the products formed are discussed. P. HAAS

2

HELLER, I.

POLAND / General and Specialized Zoology. Insects. P
Physiology and Toxicology.

Abs Jour : Ref Zhur - Biol., No 10, 1953, No 44722

Authors : Heller, I.; Szarkovska, L.
Inst : Polish Academy of Sciences
Title : The Study of Quinonic Respiration in Insects.

Orig Pub : Byul. Pol'skoy AN, 1956, Otd. 2, 4, No. 10,
355-360.

Abstract : The presence of quinone dehydrogenase in tissue homogenates of *Colerio euphorbiae* pupae and moths was determined. The homogenate and paraquinone were added to the reestablished alcoholdehydrogenasecozymase from brewer's yeast. The rapidity of cozymase oxidation was spectrophotometrically determined by the drop in absorption at 310 mu. Absorption at 245 mu, which was

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APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000618010003-2"

POLAND / General and Specialized Zoology. Insects. P
Physiology and Toxicology.

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 44722
(cont)

characteristic for paraquinone, decreased as the cozymase oxidized. Quinone dehydrogenase was found in the muscles and fat of the pupae and moths and was not found in the hemolymph. The nature of the natural substratum of quinone dehydrogenase was not revealed in insects. These data prove the presence of quinonic respiration in insects. -- L. A. Sobetskiy.

card 2/2

HELLER, J., MOZOLOWSKI, Wl.

Jakub Karol Parnas; education activity during 1916-1939. Postępy
biochem. 4 no.1:5-65 1958

(BIOGRAPHIES.

Parnas, Jakub K., biobibliog. (Pol)

HELLER, J.; JEZEWSKA, M.

Nucleic acids and other phosphorus fractions in the course of metamorphosis of the Chinese Tussur moth. (*Antheraea pernyi*). Acta biochim. polon. 5 no.1:3-17 1958.

1. From the Institute of Biochemistry and Biophysics, Polish Academy of Sciences, Warsaw, Department of Evolutionary Biochemistry.

(MOTHS, *Antheraea pernyi*, nucleic acid & phosphorus fraction
determ. during metamorphosis)

(NUCLEIC ACIDS, determination
in moths during stages of metamorphosis)

(PHOSPHORUS, determination
in moths during stages of metamorphosis)

HOLLER, J.; HLODOJA, M.; GLOJACKI, T.

Is ergolic polyacetal in the ~~last~~^{heavy} bath. p. 343.

JOSEF NIECHYTA, KROKUS. (Polska Akademia Nauk, Komitet Historyczny)
Warszawa, Poland. Vol. 5, no. 4, 1958.

Monthly list of east European accessions (cont.) 10, vol. 8, no. 7/1959. July

Uncl.

BELZECKA, K.; RACZYNSKA-BOJANOWSKA, K.; HELLER, J.

Studies on transamination in insects. I. Asparto-~~A~~-ketoglutaric
transaminase in *Celerio euphorbiae* L. Acta biochim.polon. 6
no.2:195-203 '59.

1. Zaklad Chemii Fizjologicznej, Akademia Medyczna, Zaklad
Biochemii Ewolucyjnej, Instytut Biochemii i Biofizyki PAN,
Warszawa.

(TRANSAMINASES - metabolism)
(INSECTS - metabolism)

SZAFRANSKI, P.; SULKOWSKI, E.; GOLASZEWSKI, T.; HELLER, J.

Isolation and some characteristics of the cytoplasmic nucleopeptides
from guinea pig liver. Acta biochim. polon. 7 no.2/3:151-165 '60.

1. Institute of Biochemistry and Biophysics, Polish Academy of
Sciences, Warsaw.

(LIVER chem)

(PEPTIDES chem)

(PROTOPLASMS chem)

HELLER, J.; CHOJNACKI, T.; PIECHOWSKA, Maria J.

In the Hawk-moth *celario euphorbiae*. Acta biochim.polon. 7
no.2/3:187-192 '60.

1. Departmen t of Evolutionary Biochemistry, Institute of
Biochemistry and Biophysics, Polish Academy of Sciences, Warsaw.
(PYROPHOSPHATES metab)
(INSECTS metab)

HELLER, J.; JEZEWSKA, Monika M.

The uric acid riboside in sphingidae moths. Acta biochim.polon.
7 no.4:369-373 '60.

1. Institute of Biochemistry and Biophysics, Polish Academy of
Sciences, Warsaw.

(URIC ACID metab)

(INSECTS)

HELLER, J.; JEZEWSKA, M.

Phosphorus fractions in the course of metamorphosis of *Celerio euphorbiae*. *Bul Ac Pol biol* 8 no.8:335-337 '60. (EEAI 10:3)

1. Institute of Biochemistry and Biophysics, Polish Academy of Sciences.
Presented by J.Heller.

(PHOSPHORUS)

(*CELERIO EUPHORBIAE*)

(MATAMORPHOSIS)

P/002/61/000/001/003/007
D001/D101

AUTHOR: Heller, Józef, Professor, Corresponding Member of PAS
(Polish Academy of Sciences), Director of the Institute
of Biochemistry and Biophysics

TITLE: Institute of Biochemistry and Biophysics; objectives,
achievements and outlooks

PERIODICAL: Nauka Polska, no. 1, 1961, 115-122

TEXT: The author presents an account of current biochemical re-
search in Poland. Biochemistry originated from physiology and che-
mistry and was secluded as a separate discipline of science between
the two World Wars. At that time, several Polish scientists became
well-known for their achievements in this branch of science. J. Par-
nas in Lwów worked on the metabolism of sugars; L. Marchlewski in
Kraków was an internationally-known authority on chlorophyll, blood
pigment and sugar structure. In Warsaw, S.T. Przyłęcki worked on com-
plex proteins, T. Chrzęszcz on fermentation and Professor K. Biała-
szewicz pioneered in problems of biochemistry and comparative physio-

Card 1/4

Institute of Biochemistry...

P/002/61/000/001/003/007
D001/D101

logy. The introduction of modern laboratory techniques in Western countries during and after World War II and an expanding staff of scientists contributed to a tremendous progress in biochemistry. At the same time, Polish biochemistry suffered heavy losses, especially in scientific personnel. In order to resume this work again, a biochemical section was organized at the Państwowy Zakład Hygieny (State Hygiene Department) in Warsaw in 1951. Three years later, in 1954, this section was turned into the Zakład Biochemii PAN (Biochemistry Department of the Polish Academy of Sciences). At first, the personnel of this Department consisted of only five scientists. Within two years the staff was increased to 4 professors, 3 docents, 1 scientist and 34 scientific assistants; about 40 scientific papers were published during this period. In 1956, the Department was reorganized and again converted into the Instytut Biochemii i Biofizyki PAN (Institute of Biochemistry and Biophysics). Improper housing, lack of up-to-date equipment and shortage of personnel still impedes the work in the institute. However, in spite of these difficulties, quite remarkable results have been achieved. Research presently carried out at the institute concentrates on the following main

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Institute of Biochemistry...

P/002/61/000/001/003/007
D001/D101

subjects: 1) Synthesis of proteins and nucleo-peptides; 2) Radio-chemistry and enzymation of nucleic acid and its derivatives; 3) biochemistry of cell respiration; 4) metabolism of insects; 5) nitrogen metabolism of plants; 6) immunogenic structures versus biological activity; and 7) kidney biochemistry. Nearly 500 scientific reports were published since the institute was organized in 1956. Reprints of same are distributed to similar institutions all over the world. A mutual exchange of scientific workers between related institutions within Soviet-bloc and Western countries is also maintained. The staff of the institute presently consists of 33 scientific workers with scientific degrees; nine assistant workers have either doctor's or candidate of science degrees. Seventeen members of the staff and two outsiders qualified for and obtained various scientific degrees. The institute now consists of three departments: Zakład Biochemii Ewolucyjnej (Evolution Biochemistry Section), Zakład Biochemii Roślin (Plant Biochemistry Section), Zakład Biofizyki (Biophysics Section) and two laboratories - Biochemii Drobnoustrojów (Laboratory of Microorganism Biochemistry) ✓

Card 3/4

Institute of Biochemistry...

P/002/61/000/001/003/007
D001/D101

and Biochemii Patologicznej (Laboratory of Pathological Biochemistry).
The latter is in Gdansk while all others are in Warsaw, each in a
different building.

ASSOCIATION: PAN (Polish Academy of Sciences).

SUBMITTED: December 1960

Card 4/4

HELLER, Jozef, professor

Polish Academy of Sciences Institute of Biochemistry and Biophysics.
Review Pol Academy 6 no.1:53-59 Ja-Mr '61.

1. Member, Polish Academy of Sciences, head of the Institute of
Biochemistry and Biophysics, Warsaw, Krakowskie Przedmiescie 26/28.

(Polish Academy of Sciences) (Poland--Research)
(Poland--Biological chemistry)
(Poland--Biological physics)

SMYDZI, W.

SMYDZI (1900-); Given Name

Country: Poland

Academic Degrees: Academic degree not indicated

Affiliation: Department of Biochemistry, Central College of Agriculture,
Warsaw (Instytut Biochemii, SWU, Warszawa)
Institute of Biochemistry and Biophysics, Polish Academy
of Sciences (Instytut Biochemii i Biologii, PAN)

Source: Warsaw, Bulletin de l'Académie Polonaise des Sciences, Serie
des Sciences Biologiques, Vol. IX, No. 4, 1961, pp 101-109.

Date: "Stereospecificity of the Enzymes of Bacteria
Producing Lysine Induced with Lysine," paper presented
by W. Smydzi on 14 February 1961.

Co-author:

TOCINO, N., same affiliation as above.

HELLER, Jozef

The 5th International Congress of Biochemists, Moscow, August 10 -- 16,
1961. Nauka polska 10 no.2:121-128 '62.

1. Członek rzeczywisty Polskiej Akademii Nauk, Warszawa

HELLER, Jozef

The International Union of Biochemistry; Moscow August 14 - 16, 1961.
Nauka polska 10 no.2:129-130 '62.

1. Członek rzeczywisty Polskiej Akademii Nauk, Warszawa

HELLEŃ, Jozef, prof. dr.; MOCHNACKA, Irena, prof. dr.; SZAFRAŃSKI,
Przemysław, doc. dr.; SZARKOWSKI, Jan Włodzimierz, dr.

Letter to the editor concerning molecular biology. Kosmos biol
11 no.3:305-306 '62.

1. Zakład Biochemii Ewolucyjnej, Instytut Biochemii i Biofizyki,
Polska Akademia Nauk, Warszawa.

*

HELLER, Josef; IASSOTA, Zofia

The Institute of Biochemistry and Biophysics of the Polish
Academy of Sciences. Kosmos biol 11 no.4:463-470 '62.

*

JEZEWSKA, Maria M.; GORZKOWSKI, B.; HELLER, J.

Nitrogen compounds in snail *Helix pomatia* excretion. *Acta biochim. pol.* 10 no.1:55 '63.

1. Institute of Biochemistry and Biophysics, Polish Academy of Sciences,
and Department of Physiological Chemistry, Medical School, Warszawa.
(NO SUBJECT HEADINGS)

JEZEWSKA, Maria M.; GORZKOWSKI, B.; HELLER, J.

Seasonal changes in the excretion of nitrogen wastes in *Helix pomatia*. *Acta biochim. polon.* 10 no.3:309-314 '63.

1. Institute of Biochemistry and Biophysics, Polish Academy of Sciences, and Department of Physiological Chemistry, Medical School, Warszawa.

(NITROGEN) (CARBON ISOTOPES) (URIC ACID)
(XANTHINES) (GUANINE)

L 2066-66

ACCESSION NR: AP5027298

CZ/0053/65/014/002/0171/0171

AUTHOR: Heller, J.

TITLE: Hypertonic urine in fish?

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 2, 1965, 171

TOPIC TAGS: animal physiology, metabolic waste, urology, experiment animal

ABSTRACT: Osmotic pressure of urine and of plasma in fish is discussed. The ability to form urine hypertonic with respect to plasma is limited to mammals and some species of birds. Formation of hypertonic urine by fish *Fundulus Kansae* is discussed; the fish lives in both fresh and sea water. In fresh water the urine is hypotonic, but when the fish is first transferred to sea water, urine becomes hypertonic to plasma for a few days. After this period the urine becomes slightly hypotonic, in a way corresponding to the condition in other kinds of fish. Orig. art. has 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: LS

NR REF SOV: 000

OTHER: 000

JPRS

Card 1/1

L 4064-66 EWP(t)/EWP(k)/EWP(b)/EWA(c) JD/HN

ACC NR: AP5022939

SOURCE CODE: CZ/0032/65/015/009/0643/0649

AUTHOR: Henrych, J. (Engineer, Candidate of sciences, Prague)

ORG: none

TITLE: Explosive forming of metals

SOURCE: Strojirenstvi, v. 15, no. 9, 1965, 643-649

TOPIC TAGS: metal forming, explosive forming

ABSTRACT: The theoretical principles of explosive forming of metals are analyzed. The specific features of shock waves and their effect on fixed and movable objects in air or water are examined. Equations for calculating the main parameters of shock waves are derived. Orig. art. has: 11 figures and 39 formulas. [WW]

SUB CODE: MM, ME/ SUBM DATE: none/ OTH REF: 003/ SOV REF: 008/ ATD PRESS: 4128

BVK
Card 1/1

L 1498-66 EWP(k)/EWP(t)/EWP(b)/EWA(c) JD/HW

ACCESSION NR: AP5022055

CZ/0034/65/000/009/0678/0679

AUTHOR: Henrych, J. (Engineer); Chmelik, V. (Candidate of sciences)(Engineer);
Myskova, V. 44,55 44,55 30 B

TITLE: Device for explosive metal forming 44,55

SOURCE: Hutnicke listy, no. 9, 1965, 678-679

TOPIC TAGS: metal forming, explosive metal forming, explosive metal forming device

ABSTRACT: This Author Certificate introduces a device for explosive forming of metals (see Fig. 1 of the Enclosure). Two charges 1 are placed opposite each other in housing 2. Inside the housing is two-part die 3 and metal tube 4 to be formed. The charges are exploded simultaneously and produce two shock waves moving toward each other. The collision of the shock waves produces a very high pressure which forces the metal toward the die walls. The position, size, and detonation time of the charges are selected so that the shock waves collide where the metal has to be formed. Air escapes from between the metal and die through canals 5. Orig. art. has: 4 figures. [WW]

Card 1/3

L 1498-66

ACCESSION NR: AP5022055

ENCLOSURE: 01

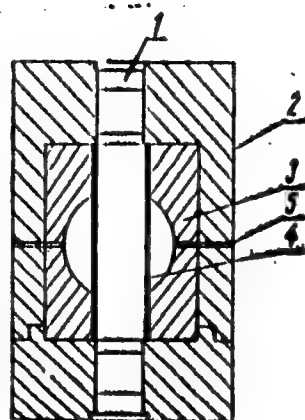


Fig. 1. Explosive forming device

Card 2/2

L 1498-66

ACCESSION NR: AP5022055

ASSOCIATION: none

SUBMITTED: 23Sep63

NO REF SOV: 000

ENCL: 01

OTHER: 000

SUB CODE: MM

ATD PRESS: 4095

Card 3/3

HELLER, K.
No. 1, 1953
Mechanics, electrotechnics,
& power

531.707

1787

Heller K. Protective Hoods for Manometers.
"Ochroniaki dla manometrów" Przemysł Chemiczny. No. 4, 1952,
pp. 184-187, 6 figs.

An account and diagrams of protective devices for manometers, satisfactorily introduced by the author in factory practice. Detailed description of special hoods for manometers of up to 350 atm pressure and above (depending on material) in the case of a receptacle of inside diameter 50 mm, inside diameter 20 mm; antichlorine hoods for operating dry chlorine; hoods for operating ammonia at 500 atm when the bending strength of steel = 1000 kg/cm²; hoods adapted for particularly critical application of concentrated HNO₃ at 120 atm pressure when the bending strength of steel = 600 kg/cm² and steel hoods up to 100 atm when the bending strength of steel = 500 kg/cm². Use of the above protectors gives the advantage of enabling normal manometers to be used in a number of cases which would otherwise require manometers of special design.

HELLER, K.

30

2962 031.718:61.07
Heller K. The Construction of a Frame for Venturi Throat Fittings
~~in Gas-Flow Meters.~~
„Konstrukcja oprawy zwężki mierniczej”. Przemysł Chemiczny.
No. 12, 1953, pp. 625-628, 12 figs.

The author has devised a new kind of frame for the Venturi throat fittings used to measure the flow of gas. This device has many advantages over other similar instruments. It has an exceptionally small diameter, 25 mm, and can be easily hammered and cut out of thick sheet iron. The fittings even in the case of large internal pipe diameters can be easily machine-turned. The construction can be applied to the full assortment of diameters from 20 to 1000 mm and can be adapted to all nominal flanges. Measurements carried out during flow in different fluids, such as steam, water, ammonia etc., gave results that prove — even after only a few months' operation — to be not inferior to those obtained by other means, with the additional advantage of considerable economy in material and labour.

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HELLER, K.

TECH GLOW

PERIODICAL: PERIODICAL, MEDICAL, Vol. 4, no. 11, Nov. 1954.

HELLER, K. Marginal notes on the Conference on Precision Medicine and Measurement Techniques, Warsaw, June 12-14, 1954, p. 512.

Vol. 4, no. 12, Dec. 1954.

Monthly List of East European Acquisitions (SAMI) 10 Vol. 4, no. 4
April 1955, Unclasp.

HELLER, K., inz.

Resynchronization of hydroalternators by electric braking. El
tech obzor 53 no.12:668-669 D '64.

HELLER, K., inz.

Shock de-excitation of synchronous machines. El tech obzor 53
no. 5:272-273 My '64.

HELLER, Kazimierz

The method of root-locus curve made more accurate by the use of curves representing the sums of inclination angles. Archiw automat 4 no.3/4:329-333 '59. (EEAI 9:7)

1. Zaklady Syntezy Chemicznej Tarnow.
(Automatic control)

P/014/61/040/011/002/002
D204/D301

AUTHOR: Heller, Kazimierz F.

TITLE: The problems of automation in the chemical industry

PERIODICAL: Przemysł chemiczny, v. 40, no. 11, 1961, 621-624

TEXT: A discussion of the potentials of automation and the difficulties associated with its introduction into the chemical industry, aimed at drawing attention and stimulating interest in this problem. The first stage of automation is defined as the control (mainly stabilization) of only one production parameter. The advantages of such "point automation" are difficult to assess on a financial basis. The second stage depends on perfecting measurements and connecting a network of instruments to a central control board manned by trained personnel. Economically, this is the most important stage of automation. In the third stage, the human personnel is replaced by a programmed computer which selects and maintains optimal conditions for the chemical process. The above 3 stages are discussed and illustrated with examples. The importance of

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P/014/61/040/011/002/002
D204/D301

The problems of automation ...

improving instrumentation, before the introduction of even the first stage, especially the measurement of temperature, fluid flow and chemical composition, is stressed and briefly discussed. The remainder of the article is concerned with the pros and cons of introducing automation into chemical technology. Acceptance of automation is largely hindered by a conservative outlook and a lack of understanding of both the methods and scope of automation and of the chemical processes themselves. Automation will prove extremely valuable in regulating rapid reactions, but would in most cases be superfluous if the process is slow. Adaptation of existing plants to automation, whose advantages have often been exaggerated, would frequently be too expensive, especially as immediate success cannot be guaranteed in every case. The value and limitations of model work are mentioned. Cooperation between plant designers and automation laboratories is strongly advocated and attention is drawn to the pronounced need for a wide range of measuring and regulating instruments and computers if excessive imports are to be curtailed. The author considers that each manufacturing plant should be well and fully equipped (including research laboratories)

Card 2/3

The problems of automation ...

P/014/61/040/011/002/002
D204/D301

and should produce a fairly narrow but complete range of instruments. A less critical attitude to Polish instruments and better salesmanship are advised. The author ends by anticipating the usual passive resistance to his views.

ASSOCIATION: Zakłady azotowe Tarnów (Nitrogen Works Tarnów)

Card 3/3

HIMMER, K., inz.

International series of nominal very high voltages. EI tech
obzor 53 no.8:450 Ag '64.

HELLER, L.; KADLED, S.

Use of one-sided adhesives in the leather industry. p. 50

KOZADITIVI, Praha, Czechslovakia, Vol. 9, no. 2, Feb. 1959

Monthly list of East European Accessions (EEAI) IC, Vol. 8, No. 10
Oct. 1959
Uncl.

1ST AND 2ND ORDER		PROCESSES AND PROPERTIES INDEX	
<p>CA HELLER, L.</p>		<p>Evaporation of solutions in vacuo. L. Heller, Hung. 111,970, Apr. 1, 1925. A heating medium (H₂O, C₂H₅Cl, CH₂Cl₂, C₃H₇Cl or NH₃) is liquefied under high pressure and the heat of evaporation evolved is used to heat the solids. Then the heating medium is evaporated, once more under lower pressure, the vapors being condensed. The heating medium should have a critical temp. under 30°.</p>	
<p>434.51.4 METALLURGICAL LITERATURE CLASSIFICATION</p>		<p>434.51.4 METALLURGICAL LITERATURE CLASSIFICATION</p>	